# Contents

## Introduction to the Proceedings

NATURAL SCIENCE AND TECHNOLOGY EDUCATION: BalticSTE2025
Vincentas Lamanauskas ..... 7

## Articles

EDUCATION TRANSFORMATION FOR NET GENERATION
Boris Aberšek, Metka Kordigel Aberšek ..... 11

A STEM APPROACH TO STANDARD SCIENCE CURRICULUM TOPICS: CHEMICAL REACTIONS AS A TYPICAL EXAMPLE
Martin Bílek, Karel Kolář, Monika Pelikánová ..... 18

DEVELOPMENT OF THE CONTENT OF THE "BIOLOGY I" SET OF METHODOLOGICAL MATERIALS FOR A COMPETENCE-BASED APPROACH TO SECONDARY SCHOOL BIOLOGY
Rita Birzina, Daiga Kalnina, Sandra Kalnina ..... 30

THE CONCEPT OF FORCE: AN EDUCATIONAL ITINERARY WITH A HISTORICAL SUPPORT
Paolo Bussotti ..... 47

INTEGRATING MULTIMODAL TEACHING STRATEGIES INTO STEM EDUCATION: REFLECTIONS FROM PRE-SERVICE AND IN-SERVICE TEACHER WORKSHOP EXPERIENCES
Narendra D. Deshmukh, Sandhya A. Thakur ..... 71

THE ROLE OF LEADERSHIP IN CURRICULUM TRANSFORMATION: IMPLICATIONS FOR SCIENCE, TECHNOLOGY, ENGINEERING, ARTS AND MATHEMATICS IN HIGHER EDUCATION
Angela James, Cecile Gerwel Proches, Macdonald Kanyangale, Valentina Dagienė, Eglė Jasutė, Roger Waldeck ..... 86

REIMAGINING PRESCHOOL PEDAGOGY: AI-ENHANCED TEACHING THROUGH MULTILITERACIES-INFORMED CURRICULUM INNOVATION
Kallia Katsampoxaki-Hodgetts, Konstantinos Kotsidis, Stamatios Papadakis, Panagiotis Anastasiades ..... 104

METACOGNITIVE STRATEGIES FOR READING SCIENTIFIC AND SUSTAINABILITY-RELATED CONTENT IN DIGITAL AND PRINT MEDIA
Maja Kerneža ..... 120

PRE-SERVICE PRESCHOOL AND PRIMARY SCHOOL TEACHERS' ATTITUDES ON ARTIFICIAL INTELLIGENCE: READINESS TO USE AND POTENTIAL CHALLENGES
Vincentas Lamanauskas ..... 133

BRIDGING DISCIPLINES: THE ROLE OF MATHEMATICAL REASONING IN INTERDISCIPLINARY INQUIRY
Arto Mutanen, Antti Rissanen, Kalle Saastamoinen ..... 146

SCIENCE EDUCATION FOR STUDENTS WITH SPECIFIC LEARNING AND ATTENTION DISORDERS: AN EVALUATION OF READING STRATEGIES USING EYE-TRACKING TECHNOLOGY
Aušrinė Raudoniūtė ..... 158

GENERATING CURRICULA: A HUMAN-CENTRED PERSPECTIVE IN THE ERA OF ARTIFICIAL INTELLIGENCE
Tiia Rüütmann, Urve Läänemets ..... 180

LANDOLT TABLES IN PRIMO LEVI'S "BEST IS WATER" FOR VALUE-BASED CHEMICAL EDUCATION
Uladzimir K. Slabin ..... 197

**Information**

KEYNOTE SPEAKERS ..... 211

SYMPOSIUM POSTER ..... 214

BalticSTE2027 ..... 215

NATURAL SCIENCE EDUCATION / GAMTAMOKSLINIS UGDYMAS ..... 216

JBSE ..... 217